


**Please Note: Although the specific partnership described in this case study is no longer in existence, the case study is still a model for other projects.**

	<p align="center"><b>Mercury Waste Solution</b></p> <p align="center"><b>Recycling Mercury Waste through a Collection Program Partnership</b></p>
<p><b><i>Standard Industrial Classification (SIC)</i></b></p>	<p>Secondary Nonferrous Metals/3341</p>
<p><b><i>Type of Waste</i></b></p>	<p>Mercury containing articles and devices including elemental mercury, where mercury is the only hazardous constituent.</p>
<p><b><i>Strategy</i></b></p>	<p>Mercury Waste Solutions in partnership with Lab Safety Supply, developed a closed loop recycling program that provides a cost effective solution to manage mercury containing devices.</p>
<p><b><i>Company Background</i></b></p>	<p>Mercury Waste Solutions, Inc., located in Union Grove, Wisconsin is a mercury recycling facility which has been in operation since 1995. Headquartered in Mankato, Minnesota, the facility employs 22 people and became a publicly traded company in February, 1997. Mercury Waste Solutions recycles mercury and mercury-bearing articles and devices shipped from generators across the U.S. and Canada. The state-of-the-art technology utilized was developed internally, using the latest computer monitoring and control technology. Mercury Waste Solutions can process fifty 55-gallon drums of mercury waste per day.</p> <p>Lab Safety Supply is a leading direct marketer of safety products in the United States. Since its founding in 1977, Lab Safety Supply has risen rapidly to become a leading catalog distributor in the industry, serving 350,000 customers nationwide from its Janesville, Wisconsin facilities. Lab Safety Supply serves manufacture's, high technology firms, universities, and health care with high quality products and services at a competitive price.</p>
<p><b><i>Original Process</i></b></p>	<p>Small quantities of mercury bearing waste are difficult to manage due to the expense of proper management compared to the quantity of mercury in the waste. Waste management companies showed little interest in assisting companies with these small quantities, and many generators were faced with storing this material for extended lengths of time or using disposal options which may not be the best management practice available.</p>
<p><b><i>Motivation</i></b></p>	<p>Customers for both Mercury Waste Solution and Lab Safety Supply have repeatedly asked for assistance in developing a program sufficient to properly contain, collect, store, and ship small quantities of mercury to an approved recycling facility.</p>
<p><b><i>Pollution Prevention Process</i></b></p>	<p>After researching the marketplace and working with the Department of Natural Resources for the last twelve months, a partnership was formed to develop a product where small quantities of mercury containing devices can be recycled in a safe, cost-effective manner. This</p>

	<p>collaboration resulted in developing a program that provides a turn key service. This program offers two sizes of containers which can accommodate up to one pound of elemental mercury. These container's are offered through Lab Safety Supply catalogs at a cost of \$65.00 for the thousand milliliter (1,000 ml) and \$80.00 for the one gallon container and include the cost of recycling. The kits come complete with the container and necessary information to collect, store, and ship the mercury waste to Mercury Waste Solutions for recycling. Recovered mercury is sold to mercury refining facility where it is further purified. It is then sold for use in new products such as amalgams, thermometers, etc. The recovered mercury eliminates the need for the introduction of "new mercury" in the product life cycle. This service meets or exceeds all applicable state and federal regulations.</p>				
<b>Stage of Development</b>	The mercury collection service has been fully implemented as of August 1, 1997.				
<b>Level of Commercialization</b>	This service is available to customers throughout the United States.				
<b>Obstacles</b>	Mercury Waste Solutions and Lab Safety Supply faced many challenges in developing this program. Many issues had to be addressed such as proper DOT containerization, shipping requirements and packaging limitations. An internal program was perfected to manage the estimate thousands of small containers. After countless hours, protocols evolved to tie the order entry systems of both companies together.				
<b>Economics</b>	<b>Example: Disposal of Two (2) pounds of mercury containing thermometers</b>	<b>Description</b>	<b>Cost Old Process</b>	<b>Cost New Process</b>	<b>Cost /Savings</b>
	Material and Supplies	Lab Safety Supply Recycling Kit	0	\$80/ container	-\$80
	Waste Handling	Profiling	\$75 -	0	\$75 -
		Sampling	\$150	0	\$150
		Shipping	\$75 -	\$10 - 15	\$75 -
		Waste Processing	\$350	0	\$350
			\$50 -		\$40 -
			\$250		\$235
			\$250 -		\$250 -
			\$500		\$500
		Total Estimated savings for this example			\$360 - \$1155
	The above example illustrates the costs associated with disposing of small quantities of mercury waste utilizing a traditional hazardous waste				

	<p>management program versus the mercury recycling program.</p> <p><b>Pay Back Period</b>  The payback for using the mercury recycling service versus traditional hazardous waste management would be immediate.</p>	
<b>Benefits</b>	<p>The true benefit of this program is the alternative provided to companies storing waste for extended periods of time or disposing of waste in a method that may be harmful to employees or the environment. The recycling program provides a verifiable means to manage mercury wastes, eliminating long term liability associated with other disposal practices. Another benefit is the elimination of the potential for cross media transfer through the solid waste stream, medical waste stream or publicly owned treatment works. The final advantage of the partnership program to Mercury Waste Solutions is the opportunity to service very small quantity generators, offering rapid turnaround time through uniform waste streams, enabling accelerated processing.</p>	
<b>Technology Transfer</b>	<p>Programs such as the mercury collection program could be applied to many small quantity waste streams generated by businesses in Wisconsin.</p>	
<b>Other Environmental Programs</b>	<p>Mercury Waste Solutions recently received a demonstration grant from the Department of Natural Resources for the Mercury Roundup Project. This program is designed to work with dentists, hospitals and schools within Wisconsin to provide mercury collection, free of charge, for a period of one year. The program is designed to demonstrate how a community supported outreach effort could sustain a targeted sector and substance based collection program</p>	
<b>Company Address</b>	<p>Mercury Waste Solutions, Inc.  21211 Durante Avenue  Union Grove, WI 53182  414-878-2599  414-878-2699 FAX</p>	<p>Lab Safety Supply  P.O. Box 1368  401 S. Wright Rd.  Janesville, WI 53547  800-356-0783  800-543-9910 FAX</p>
<b>Contact Person</b>	<p>Mercury Waste Solutions  Jim Cornwell  National Sales Manager  414-878-2599 Phone  414-878-2699 FAX  mws@wi.net E-mail</p>	<p>Lab Safety Supply  Lori Barger  Product Manager  608-754-2345 Phone  608-757-4794 FAX  800-356-2501 Safety Techline  800-356-0783 Customer Service.</p>
<b>Pollution Prevention Resources</b>	<p><b>Free, On-site Technical Assistance</b>  University of Wisconsin Extension  Solid and Hazardous Waste Education Center  Milwaukee area: 414/475-2845  Remainder of state: 608/262-0385</p> <p><b>Pollution Prevention Information Clearinghouse</b>  Wisconsin Department of Natural Resources  Cooperative Environmental Assistance</p>	

608/267-9700 or e-mail: cea@dnr.state.wi.us



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Wisconsin Department of Natural Resources**

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